

In the Claims:

Delete claims 1-19 and add new claims 20-39.

20. (new) An electrochemical cell comprising a non-mercury added zinc anode comprising uniformly shaped zinc particles having consistent surface finishes.
21. (new) The electrochemical cell defined in claim 20 wherein said surface finishes are selected from the group consisting of smooth, porous, grooved, dendritic and waffle-like.
22. (new) The electrochemical cell defined in claim 20 wherein said zinc particles comprise consistent porosity characteristics.
23. (new) The electrochemical cell defined in claim 22 wherein said porosity is greater than 25 percent.
24. (new) The electrochemical cell defined in claim 23 wherein said porosity is greater than 50 percent.
25. (new) The electrochemical cell defined in claim 20 wherein said uniformly shaped zinc particles have a morphology selected from the group consisting of filament, donut, biscuit, tentacle, snake, corrugated, helix, dog bone, sponge, honeycomb, and foam.
26. (new) The electrochemical cell defined in claim 20 wherein said uniformly shaped zinc particles have a tap density less than 2.5 g/cc.
27. (new) The electrochemical cell defined in claim 20 wherein said uniformly shaped zinc particles have a tap density less than 2.0 g/cc.
28. (new) The electrochemical cell defined in claim 20 wherein said uniformly shaped zinc particles have a tap density less than 1.5 g/cc.

29. (new) The electrochemical cell defined in claim 20 wherein said uniformly shaped zinc particles have a tap density less than 1.3 g/cc
30. (new) The electrochemical cell defined in claim 20 wherein said anode has a zinc weight concentration less than 70 percent.
31. (new) The electrochemical cell defined in claim 20 wherein said anode has a zinc weight concentration less than 68 percent.
32. (new) The electrochemical cell defined in claim 20 wherein said anode has a zinc weight concentration less than 66 percent.
33. (new) The electrochemical cell defined in claim 20 wherein said anode has a zinc weight concentration less than 64 percent.
34. (new) The electrochemical cell defined in claim 20 wherein said anode has a zinc weight concentration less than 62 percent.
35. (new) The electrochemical cell defined in claim 20 wherein said uniformly shaped zinc particles comprise between five weight percent and fifty weight percent of the zinc in said anode.
36. (new) The electrochemical cell defined in claim 20 wherein said uniformly shaped zinc particles comprise between five weight percent and twenty weight percent of the zinc in said anode.
37. (new) The electrochemical cell defined in claim 20 wherein said uniformly shaped zinc particles comprise between five weight percent and fifteen weight percent of the zinc in said anode.
38. (new) The electrochemical cell defined in claim 20 wherein said uniformly shaped zinc particles comprise between five weight percent and ten weight percent of the zinc in said anode.
39. (new) The electrochemical cell defined in claim 20 wherein said anode has a zinc weight concentration less than 68 percent, said uniformly shaped zinc particles

comprise between five weight percent and twenty weight percent of the zinc in said anode, and said uniformly shaped zinc particles have a tap density less than 2.5 g/cc.